



PLANT-TRIAL RESULTS • EXPERT TESTED


'Red Head'
fountain
grass

Battle of the grasses

If you think they're all the same, this trial proves
that some are champions and some are not



'Stripe It Rich' Japanese
forest grass



'Carousel' little
bluestem

BY RICHARD HAWKE

I think grasses suffer from lumping. I'm guilty of it myself, many times ending a list of companion perennials with the phrase "and some ornamental grasses." This gives the impression that all grasses are the same and interchangeable. They're not, and when we trialed dozens of some of the newest and most popular types at the Chicago Botanic Garden, the differences between them became even more clear. While I still feel like a novice where grasses are concerned, my appreciation has deepened as I've opened my eyes to their uniqueness. Rather than treating grasses as footnotes in the garden, I now see them as distinctive plants. Grasses are unsung heroes—often perceived as sidekicks to flashier perennials or relegated to the background in a landscape. But certain grasses are so much more than workaday plants, and they deserve a prime spot where their notable qualities can be seen and heard. These select grasses are a sensory delight of sight, sound, motion, and smell. The following top performers earned excellent marks in our trial because of their incredible architecture, beautiful inflorescences, and unfaltering performance despite weather inconsistencies.

Top performers

These grasses put the competition to shame when it comes to looks, behavior, and toughness.

Watching **'Stripe It Rich' Japanese forest grass** (*Hakonechloa macra* 'Stripe It Rich') gradually bulk up is worth the wait. Like other variegated forms of Japanese forest grass, 'Stripe It Rich' is a slow grower at the start, coming into its own by the third year. Golden yellow leaves, striped with white, need some sunlight to remain vibrant; for optimal color, plant it in full to partial sun and in a moist, organic soil. In our trials, the plants were in deep shade, so the leaves were lime green by midsummer. Japanese forest grass is among the most elegant of grasses, with gracefully cascading leaves that give the feeling of movement on even the calmest day. My cat loves nibbling on this grass, and unfortunately, rabbits love it, too.

I've grown **'Carousel' little bluestem** (*Schizachyrium scoparium* 'Carousel') longer than any other little bluestem and have always admired its first-rate performance. 'Carousel' is a compact grower with blue-green leaves that are red-purple-tinged and held against reddish stems. 'Carousel' is a kaleidoscope of softly muted

colors throughout the seasons: Blue-green, red-purple, pink, copper, and mahogany all make an appearance. The wispy silvery seeds are especially eye-catching in autumnal light. A broad, bowl-shaped habit marks 'Carousel' as different from other little bluestems, and its slender stems stay upright all winter. Little bluestems are tolerant of average to dry soils but do not like overly wet conditions. This iconic prairie grass is enjoying a renaissance these days thanks to 'Carousel' and other fantastic new selections.

'Red Head' fountain grass (*Pennisetum alopecuroides* 'Red Head') is another exceptional grass with midwestern roots, but it is not a native. Its lovely arching habit, more fountainlike than other cultivars in the trial, is topped with an eye-popping bouquet of red-purple flowers from midsummer into fall. Its bristly inflorescences—at an implausible size of 9 inches long and 3 inches wide, and looking a bit like giant woolly bear caterpillars—hold their color well into midfall before finally fading and shattering. Golden yellow fall color adorns the long

'Cordoba' purple
moor grass





'Indian Warrior' big bluestem



**'Northwind'
switchgrass**

But what about miscanthus?

Despite being categorized as “invasive” in 25 states, the District of Columbia, and Ontario, miscanthus (*Miscanthus sinensis** and cvs., Zones 4–9) continues to be a popular nursery plant. Many still insist that some cultivars are sterile and do not set viable seed. To put that theory to the test, scientists at the Chicago Botanic Garden conducted an invasive-species trial and here’s what they found.

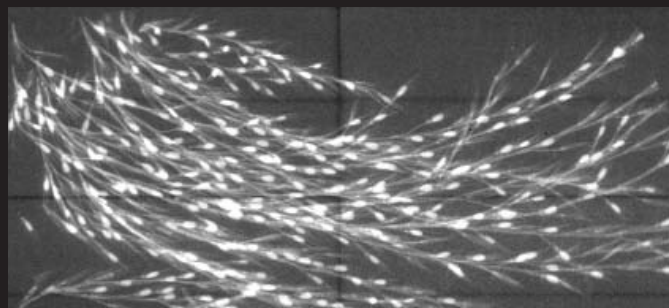
► **SEEDLINGS POPPED UP DESPITE BEING QUARANTINED.**

From 2006 through 2010, 34 miscanthus were grown in their own separate trial beds and monitored for vigor, bloom period, and flower production. It didn’t take long to see an increasing number of seedlings carpeting the trial plots and adjacent landscapes each spring, although it was impossible to know which of the so-called “sterile” plants were reseeding.

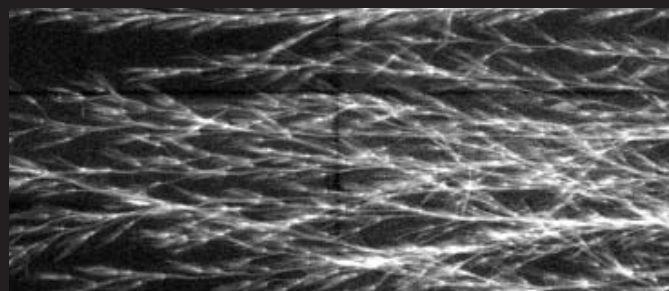
► **TESTS REVEALED THE VIABILITY OF EACH CULTIVAR’S SEED.**

In October 2010, inflorescences from each of the 34 plants were X-rayed to see if embryos were present in the seeds (presenting as well-formed, solid white orbs on the X-ray, photos, right). X-ray analysis also assesses seed quality and viable seed quantity, and reveals details of seed fill, insect infestation, and the size or absence of an embryo (which predicts the chances a seed will actually sprout into a plant). The number of viable seeds per plant varied widely, from as few as 497 (‘Dixieland’) to as many as 349,327 (‘Kleine Silberspinne’).

► **ONLY ONE MISCANTHUS IS TRULY STERILE.** The study showed that seed production and viability varied significantly among cultivars, demonstrating the importance



‘Autumn Light’ • **VIABLE SEEDS**



‘Hinjo’ • **NO SEEDS**

of evaluating all cultivars for invasive potential. In our study, only ‘Hinjo’ and ‘Silberpfeil’, ‘Cabaret’ (*M. sinensis** var. *condensatus* ‘Cabaret’), and giant miscanthus (*M. × giganteus*) produced no viable seed. But consider these results cautiously because seed production could potentially still occur as plants mature or are grown in longer growing seasons; ‘Hinjo’, for example, set seed in a study conducted at the University of Minnesota. Giant miscanthus appears to be a sterile triploid, so it should be safe anywhere it’s grown.

slender leaves into early winter. Fountain grass is a natural for planting in drifts, softening hard lines, and complementing other perennials. To prevent seedlings, deadhead fountain grass before the flowers shatter—or better yet, harvest some blooms shortly after they open for floral arrangements.

If you’re looking for drama, look no further than ‘Cordoba’ purple moor grass (*Molinia caerulea* ssp. *arundinacea* ‘Cordoba’, photo, p. 49). At nearly 7 feet tall, it has a larger-than-life presence. Its strong architectural habit is accentuated by the gentle quavering of lofty flowers arched over leafy green mounds. In a small space, one plant is, likely, all that makes sense, but I can only imagine the dramatic display statuesque ‘Cordoba’ would make in large drifts. Its stunning golden yellow fall color, peaking in mid-November in Chicago, is a late-season bonus. Because the flower stems naturally break away, there is no winter

interest to speak of. Purple moor grass prefers cool, moist conditions, so supplemental water in the hottest weather will ensure that plants remain healthy and happy.

With a name that gives a nod to its native-prairie origins, ‘Indian Warrior’ big bluestem (*Andropogon gerardii* ‘Indian Warrior’) embodies the best of big bluestem grasses. It is in fine form from spring to fall, with sturdy stems pointing skyward at all times. Big bluestems can top out at 8 feet tall, but ‘Indian Warrior’, at 5 to 6 feet tall, is compact by comparison. Lush, dark green leaves gradually turn red-purple at the same time that the dark purple flowers are in their full glory. The three-part flower, which resembles a turkey foot, is more of a curiosity than something dramatic. Like a smoldering coal, the red-purple color of the stems, leaves, and flowers intensifies heading into autumn. Plant in full sun and in any soil except a wet one and watch ‘Indian Warrior’ catch fire.

When I first grew ‘Northwind’ switchgrass (*Panicum virgatum* ‘Northwind’), it was a fairly new plant—a midwestern selection heading swiftly to the national market. Over the years, ‘Northwind’ has proven its worth, standing tall as one of the best switchgrasses ever. Its olive green leaves with a blue-green underside might seem drab when compared to more colorful varieties, such as ‘Dallas Blues’ and ‘Shenandoah’. But when heavy rain and strong winds have toppled other switchgrasses, the rigid stems of ‘Northwind’ stand firm; many of the leaf tips point straight up, rather than curving downward like other cultivars. Clouds of yellow flowers, and eventually purple fruit, float just above lush leaves in late summer. The tidy foliage turns yellow in fall before fading to tan for the winter months. In more than 10 years of observing ‘Northwind’, I can always count on its unwavering habit in any season.

*See *invasive alert* on page 86.

What you need to know about ornamental grasses

Grasses are pretty easy to grow: Their drought tolerance, adaptability to a variety of soils, low maintenance needs, and limited problems with pests and diseases are testaments to their tough character. Full sun is best for most grasses—although, as with every rule, there are exceptions.



WARM-SEASON GRASS
Prairie dropseed



COOL-SEASON GRASS
Feather reed grass

► Are they runners or clumpers?

The habit of a grass will dictate its placement. Running grasses spread by rhizomes or stolons and make good ground covers, but they can, occasionally, take over their neighborhood. As the name implies, clumping grasses maintain their individuality and stay put where you plant them.

► They can be warm- or cool-season plants

Just because your grass doesn't green up in early spring doesn't mean it's dead. Warm-season grasses break dormancy late in spring, put on the greatest growth in the warmest weather, and flower at the end of summer. Cool-season grasses, conversely, emerge earlier in spring and may stall out during hot and dry weather. Rainfall and cooler autumnal temperatures reinvigorate cool-season grasses.

► Skip the fertilizer

Highly fertile soils result in lush growth, which may cause grasses to become overly vigorous and floppy. Wind and rain can do a number on switchgrasses, too, knocking down stems into a messy heap that won't stand up again. Tying them up before bad weather is a good idea.

► Cut them back every year to make way for new growth

This can be done with your tool of choice (pruners, hedge shears, or saws). Sometimes, though, you'll need to take on a beast of a grass with something more than your own muscle. In this case, electric hedge shears, weed whips, and even chain saws can be helpful. Cut back most grasses to 4 inches tall (photo, below); short, less densely crowned grasses, such as Japanese forest grass, can be managed with hand pruners or by running a lawn mower over them.



► Divide overgrown grasses to keep them shapely

Generally speaking, grasses don't need to be divided often: Five to seven years is a good rule of thumb. Schedule the task for spring before the new leaves begin to grow. If you miss that window, however, you can cut actively growing grasses back by a third before dividing or transplanting. To get the job done, use your stamina, perseverance, and a well-sharpened ax or garden spade to divide the clumps into smaller sections. Once you've whacked the plant into pieces, wash the soil off the healthy divisions and replant immediately. Purple moor grass can be a bit of a bear to divide because of its dense root system and the time it takes to reestablish. Japanese forest grass is shallow rooted and prone to frost heaving, so divide and transplant in spring to ensure that plants are well rooted before fall.

► Excess moisture is a catalyst for disease

Rusts can be troublesome in wet, humid weather; root and crown rot are problems in poorly drained soils; and excessively wet cultural conditions, especially in highly shaded sites, may promote anthracnose and leaf spots. Planting in full sun (where appropriate) in well-drained soil and minimizing overhead irrigation are helpful in keeping diseases at bay.

► Deer avoid them; rabbits don't

Most grasses are touted as deer resistant, and I have no firsthand experience to doubt this; however, I have seen major deer browsing on switchgrass. Ground burrowers, such as gophers and voles, can be pesky, feeding on grass roots throughout the year. Rabbits (photo, right) can be troublesome, too. In late afternoon, like a page from *Watership Down*, rabbits flocked into the test gardens to graze on feather reed grass, American beakgrass (*Diarrhena americana*), Japanese forest grass, and switchgrass.



WARM-SEASON GRASSES

Big bluestem (*Andropogon gerardii* and cvs.)

Fountain grass (*Pennisetum* spp. and cvs.)

Japanese forest grass (*Hakonechloa macra* and cvs.)

Little bluestem (*Schizachyrium scoparium* and cvs.)

Prairie dropseed (*Sporobolus heterolepis* and cvs.)

Switchgrass (*Panicum virgatum* and cvs.)

COOL-SEASON GRASSES

Blue grama (*Bouteloua gracilis* and cvs.)

Feather reed grass (*Calamagrostis* × *acutiflora* and cvs.)

Purple moor grass (*Molinia caerulea* and cvs.)

New kids on the block

Although they haven't been in the trial long enough to get a stamp of approval, these newer selections are showing considerable promise.

For fall color, nobody does it better than **'Red October' big bluestem** (*Andropogon gerardii* 'Red October', USDA Hardiness Zones 3–9). Dark green leaves tipped in burgundy turn full-on burgundy in early fall. As if this color isn't luscious enough, it changes to brilliant scarlet after a few frosts. The turkey-foot red-purple flowers with orange anthers are borne at the end of red-bronze stems in summer—a color bonanza at every turn. So far, the plants are standing proudly at 6 feet tall and 3 feet wide.

'Blonde Ambition' blue grama (*Bouteloua gracilis* 'Blonde Ambition', Zones 4–9) was an unexpected surprise in the first year of the trial. It not only was showy but also reached its full size (37 inches tall and 42 inches wide) in just one summer. A profusion of chartreuse flowers blanketed fine-textured blue-green mounds in midsummer. The blonde seed heads resemble mini pennants fluttering over the plants; they remained intact through winter, providing color and texture—which was another surprise. The species is cold hardy and adaptable to a range of soil types; it even excels in our green-roof garden in just a 6-inch depth of growing medium. We're hoping 'Blonde Ambition' proves just as hardy.

'Windbreaker' big sacaton (*Sporobolus wrightii* 'Windbreaker', Zones 5–9) is a recent introduction from New Mexico. With humble beginnings as a utilitarian plan (it was developed as a wind barrier for commercial vegetable fields in the West), 'Windbreaker' has a bright future in gardens. It's a big plant, though, with stems rising 8 to 10 feet tall and 6 feet wide over time. In the first year of the trial, it was 68 inches tall and 58 inches wide, so it's well on its way to its full size. Touted as a native substitute for gigantic pampas grass (*Cortaderia selloana** and cvs., Zones 7–11), 'Windbreaker' provides all that drama—and more. Gray-green leaves form a generous mound with large pyramidal green flower clusters soaring high overhead in summer. Big sacaton is not short on positive cultural attributes, either: It's drought tolerant and adaptable to high-alkaline, saline, and poorly drained soils. Big sacaton is an important conservation and forage plant in the Southwest and a little-known relative of prairie dropseed (*Sporobolus heterolepis*, Zones 4–9).



'Red October' big bluestem



'Blonde Ambition' blue grama



'Windbreaker' big sacaton

SOURCES

The following mail-order plant sellers offer many of the grasses featured:

High Country Gardens, Santa Fe, N.Mex.; 800-925-9387; highcountrygardens.com

Klehm's Song Sparrow Farm & Nursery, Avalon, Wis.; 800-553-3715; songsparrow.com

Venero Gardens & Nursery, Shorewood, Minn.; 952-474-8550; venerogardens.com

Richard Hawke is the plant evaluation manager at the Chicago Botanic Garden in Glencoe, Illinois.

Overall Ratings:

★★★★ Excellent

★★★ Good

★★ Fair

★ Poor

Rating	Grass	Leaf Color	Fall Color	Flower Color	Bloom/Fruit Season	Height	Width	Exposure	Zones
★★★	<i>Andropogon gerardii</i> ‘Bull’s Eye’	Green	Purple, copper	Purple	Late summer and fall	84 inches	42 inches	Full sun	3 to 9
★★★	<i>Andropogon gerardii</i> ‘Indian Warrior’	Green	Purple, bronze	Dark purple	Late summer and fall	58 inches	38 inches	Full sun	3 to 9
★★★	<i>Andropogon gerardii</i> ‘Lord Snowdon’	Silvery blue	Red, orange	Pink	Fall	88 inches	64 inches	Full sun	3 to 9
★★★	<i>Andropogon gerardii</i> ‘Mega Blue’	Silvery blue-green	Smoky purple	Bronzy	Fall	90 inches	36 inches	Full sun	3 to 9
★★★	<i>Andropogon gerardii</i> ‘Red Bull’	Green	Orange, purple, red	Purple	Late summer and early fall	88 inches	48 inches	Full sun	3 to 9
★★	<i>Andropogon ternarius</i>	Blue-green	Purple, red	Silvery white	Late summer and early fall	24 inches	24 inches	Full sun	5 to 9
★★★	<i>Calamagrostis</i> × <i>acutiflora</i> ‘Overdam’	Creamy white and green	Tan	Pink to tan	Early summer to late summer	48 inches	38 inches	Full sun to partial shade	5 to 9
★★★	<i>Diarrhena americana</i>	Green	Golden brown	Greenish	Midsummer to late summer	36 inches	40 inches	Full shade	5 to 7
★★★	<i>Hakonechloa macra</i> ‘Stripe It Rich’	Yellow and white	Yellow	Yellow-green	Midsummer to late summer	23 inches	38 inches	Full sun to full shade	5 to 9
★★	<i>Hakonechloa macra</i> ‘Sunny Delight’	Green and yellow	Pink	Yellow-green	Midsummer to late summer	18 inches	22 inches	Full sun to full shade	5 to 9
★★	<i>Koeleria glauca</i> ‘Tiny Tot’	Blue-green	Tan	Green and tan	Early summer to late summer	18 inches	14 inches	Full sun	5 to 9
★★★	<i>Molinia caerulea</i> ‘Heidebraut’	Green	Golden yellow	Purple	Midsummer to late summer	50 inches	68 inches	Full sun to partial shade	5 to 8
★★★★	<i>Molinia caerulea</i> ssp. <i>arundinacea</i> ‘Cordoba’	Green	Golden yellow	Purple	Midsummer to late summer	83 inches	83 inches	Full sun to partial shade	5 to 8
★★	<i>Panicum amarum</i> ‘Dewey Blue’	Powder blue	Yellow	Bluish to tan	Late summer and early fall	78 inches	80 inches	Full sun to light shade	5 to 8
★	<i>Panicum virgatum</i> ‘Amber Waves’	Blue-green and purple	Red-purple	Green	Late summer and early fall	45 inches	18 inches	Full sun to light shade	5 to 9
★★	<i>Panicum virgatum</i> ‘Badlands’	Blue-green and purple	Purple	Purple	Late summer and early fall	62 inches	48 inches	Full sun to light shade	5 to 9
★★★	<i>Panicum virgatum</i> ‘Cheyenne Sky’	Blue-green and purple	Red-purple	Purple-red	Late summer and early fall	58 inches	48 inches	Full sun to light shade	5 to 9
★★★	<i>Panicum virgatum</i> ‘Cloud Nine’	Blue-green	Golden yellow	Pink	Late summer and early fall	75 inches	50 inches	Full sun to light shade	5 to 9
★★★	<i>Panicum virgatum</i> ‘Dallas Blues’	Blue-green	Golden yellow	Purple	Early to late fall	86 inches	100 inches	Full sun to light shade	5 to 9

